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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,341	07/18/2003	Yuhua Tong	D/A2433	4810
25453	7590	01/05/2005	EXAMINER	
PATENT DOCUMENTATION CENTER XEROX CORPORATION 100 CLINTON AVE., SOUTH, XEROX SQUARE, 20TH FLOOR ROCHESTER, NY 14644			RODEE, CHRISTOPHER D	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,341	Applicant(s) TONG ET AL.	
	Examiner Christopher RoDee	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16,18,20,21 and 23-41 is/are rejected.
- 7) ☒ Claim(s) 17,19 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/18/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Applicants are asked to update the status of the copending applications in the specification and provide patent numbers where available.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 10-16, 20, 21, 23, 26, 27, 29, 30, 34, 36, 37, and 39-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Kashimura *et al.* In US Patent 5,357,320.

Kashimura discloses a photoconductive imaging member having a conductive support and a photosensitive layer (Abstract). Example 1 shows an imaging member formed from an aluminum cylinder (col. 7, l. 63+). This cylinder is coated with a titanium oxide-containing layer, a photogenerating layer having a thickness of 0.05 microns, a triphenylamine-containing charge transport layer having a thickness of 20 microns, and a 5 micron thick surface layer formed from a polycarbonate resin having Mw of 80,000, a block copolymer having a perfluorinated C₄₋₁₆ alkyl acrylate and methyl methacrylate with Mw of 30,000, and a triphenylamine, which is the same as used in the charge transport layer. It appears that the surface layer meets the

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requirements of a charge transport layer because it has the same charge transport compound in it as the layer identified as a charge transport layer. The surface layer was coated from a solution containing the components. The fluorinated polymer in the final layer appears to be dispersed in the polycarbonate binder resin because of the larger amount of the binder (6 parts) as compared to the fluorinated polymer (0.1 parts). The support can be either in the form of a cylinder or a belt (col. 5, l. 65-68). Useful charge generation materials for the photogeneration layer include phthalocyanines and perylenes (col. 4, l. 62-65).

The imaging member is used in a process where electrostatic latent images are formed on the member, followed by development of the images, and transfer to a receiver (col. 6, l. 1, - col. 7, l. 13).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 9, 18, 24, 25, 28, 31-33, 35, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashimura *et al.* In US Patent 5,357,320 in view of *Handbook of Imaging Materials*, to Diamond and Weiss, pp. 370-395.

Kashimura was cited and described above. Kashimura does not disclose the use of an adhesive layer and a blocking layer in the manner specified in claims 24 and 25 or the metalized belts of claim 28. However, Diamond and Weiss teach that photoreceptor substrates often have a polymer interlayer that functions as a blocking layer and/or as an adhesive layer for the

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photosensitive layer that is subsequently coated (text p. 379). The reference also teaches the use of metalized polyethyleneterephthalate as an effective belt material (p. 379).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to coat an adhesive layer and/or blocking layer on the support of Kashimura and/or to use a metallized support because the text teaches that these are conventional layers in the art for their stated purposes.

Kashimura does not disclose the Type V hydroxygallium phthalocyanine or titanylphthalocyanine as the charge generation material but does disclose phthalocyanines (see col. 4, l. 62-65 and instant claims 33-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Type V hydroxygallium phthalocyanine or titanylphthalocyanine as the charge generation material because Diamond teaches that phthalocyanines are of significant commercial relevance with specific sensitivity wavelengths of commercial interest (p. 391, 394-395). Benzidine compounds are shown as effective charge transport materials in polycarbonate charge transport layers (p. 391). These well known compounds would have been obvious to use for their known function as they are ubiquitous in the art.

Kashimura also does not disclose the specific ratio of monomers in the block copolymer but it would have been obvious to optimize the amounts of the component monomer units in order to obtain the results of the invention. It would also have been obvious to optimize the length of the perfluoroalkyl chain in the block copolymer within the disclosure of the reference, such as a C₈ perfluorinated alkyl (i.e., 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl), because the reference teaches that a C₄₋₁₆ alkyl can be used and the artisan would have found it obvious to use any specific length within the disclosure.

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Double Patenting

Applicant is advised that should claim 1 be found allowable, claim 41 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Allowable Subject Matter

Claims 17, 19, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher RoDee whose telephone number is 571-272-1388. The examiner can normally be reached on most weekdays from 6:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cdr
3 January 2005



**CHRISTOPHER RODEE
PRIMARY EXAMINER**